Center for Neural Interfaces

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Background

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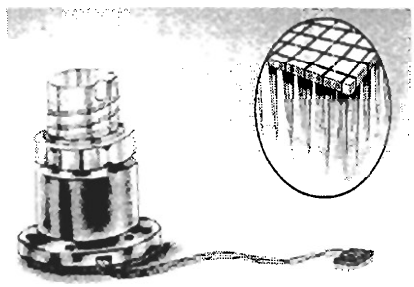
Technology Development Progress

The center technologies involve the creations of arrays of microelectrodes designed to be inserted in the nervous system. These arrays are intended to provide a multichannel interface to the nervous system that will allow direct patterned stimulation of sensory pathways or the recording of neural activity from a group of neurons. Future clinical applications could include, for example, providing a sense of sight or hearing to the blind or deaf.

The center is developing methods for the insertion of the electrode arrays into the cortical tissues and associated support systems, e.g. amplifiers, electrical cabling, data acquisition software, and data analysis software.



Highlights and Accomplishments

Several systems have been developed including a prototype 16 channel neuroamplifier system, a prototype impulse insertion system that is used to implant the electrode arrays into the cortical tissue, a prototype 100 channel neuroamplifier, and a 100 channel digital signal processor based acquisition system.

A new company, Bionic Technologies, Inc., has been formed to undertake the marketing of prototypes developed at the center to the international research community.

The company has received two Phase I SBIR awards, a total of $200,000, and first year sales are estimated at $100,000.

Summary Data:

Current		Cumulative	
1996-97 Award	$100,000	Awards	$180,000
Matching Funds	$2,138,817	Matching Funds	$2,382,626
Patents Pending	0	Patents Issued	2
Patents Issued	2	License Agreements	1
License Agreements	1	Spin-off Companies	0
Spin-off Companies	1		
Companies Assisted	5		
Industry Jobs	9		
Center Jobs	9		